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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,270	02/20/2004	Mark Bilak	FIS920040015US1	2269

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INTERNATIONAL BUSINESS MACHINES CORPORATION
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EXAMINER

CONNOLLY, MARK A

ART UNIT PAPER NUMBER

2115

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,270	BILAK, MARK	
	Examiner	Art Unit	
	Mark Connolly	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 17-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/20/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-16 and 25 have been presented for examination.
2. Claims 17-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 8/15/06.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10, 12, 15-16 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujioka et al [Fujioka] JP 2001142589 A.
5. Referring to claim 1, Fujioka teaches the apparatus for adaptively controlling power consumption within an electronic system comprising:
 - a. an integrated circuit adapted to transmit voltage control information, wherein said voltage control information corresponds to a minimum operating voltage of said integrated circuit [fig. 1 and abstract].
 - b. a storage element coupled to said integrated circuit, adapted to store said voltage control information [fig. 1 and abstract].
 - c. a variable voltage regulator coupled to said integrated circuit, adapted to receive said voltage control information from said integrated circuit, and supply an operating voltage to said integrated circuit in response to said voltage control information [0037].

- d. a communication link coupled to said integrated circuit and said variable voltage regulator, adapted to link said integrated circuit to said variable voltage regulator so that said integrated circuit may transmit said voltage control information to said variable voltage regulator [0048].
6. Referring to claim 2, Fujioka teaches the voltage control information is determined during external testing of the IC [abstract].
7. Referring to claim 3, Fujioka teaches the storage element being a non-volatile memory [0073].
8. Referring to claim 4, Fujioka teaches a temperature sensor for measuring the temperature of the integrated circuit [0037].
9. Referring to claim 5, Fujioka teaches modifying voltage control information in response to temperature data [0011].
10. Referring to claim 6, Fujioka teaches a built-in-self-test [abstract and 0055].
11. Referring to claim 7, Fujioka teaches a temperature sensor for measuring the temperature of the integrated circuit [0037].
12. Referring to claim 8, Fujioka teaches modifying voltage control information in response to temperature data [0011].
13. Referring to claims 9-10 and 12, these are rejected on the same basis as set forth hereinabove. Fujioka teaches the apparatus and therefore teaches the method performed by the apparatus.

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14. Referring to claim 13, Fujioka teaches adjusting a voltage to an integrated circuit and testing with the lowered voltage in order to determine an effective minimum voltage to be applied to the integrated circuit [0062-0063].

15. Referring to claims 15-16, these are rejected on the same basis as set forth hereinabove. Fujioka teaches the apparatus and therefore teaches the method performed by the apparatus.

16. Referring to claim 25, this is rejected on the same basis as set forth hereinabove.

The inventions are distinct, each from the other because of the following reasons:

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka as applied to claims 1-10, 12-13, 15-16 and 25 above, and further in view of DeLuca et al [DeLuca] US Pat No 5086501.

19. Referring to claim 11, although Fujioka teaches performing a test to determine a minimum operating voltage, it is not explicitly taught that the voltage is determined by testing timing critical paths of the integrated circuit. In particular, Fujioka does not teach that voltage is determined based on the speed of the integrated circuit. DeLuca teaches determining a minimum operating voltage of an integrated circuit based on a required speed [col. 2 lines 26-31 and col. 3 lines 16-17]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a means to select an appropriate minimum voltage based on speed because

DeLuca explicitly teaches that under certain activities, certain speeds are required in order for the integrated circuit to operate normally.

20. Referring to claim 14, this is rejected on the same basis as set forth hereinabove.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark Connolly
Examiner
Art Unit 2115

mc
August 16, 2006


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